

What is claimed is:

1. A navigation system performing navigation based on a detected current position and map data, the navigation system comprising;

a storage device, which is nonvolatile, from and into which files of map data are able to be read and written;

a navigation control device for controlling a navigation operation using the map data; and

a defragmenting processing device for performing a defragmenting processing with the storage device at a predetermined time.

2. The navigation system according to claim 1, wherein the defragmenting processing device continuously arranges a plurality of data fragments being arranged in a divided form and belonging to the same file.

3. The navigation system according to claim 1, wherein the storage device is a hard disk mounted in a hard disk apparatus.

4. The navigation system according to claim 3, wherein the hard disk apparatus has: a head reading and writing information from and into the hard disk; and a providing device for providing a position to which the head is made to retract from a portion on the hard disk, and wherein the defragmenting processing device continuously arranges specific data in the vicinity of the retracted position when the

defragmenting processing is performed.

5. The navigation system according to claim 1, further comprising an operation device with which executing the defragmenting processing in the storage device is able to be ordered, wherein the defragmenting processing device performs the defragmenting processing in response to the instruction of execution from the operation device.

6. The navigation system according to claim 1, wherein the defragmenting processing device interrupts the defragmenting processing if a given condition is fulfilled during executing the defragmenting processing.

7. The navigation system according to claim 6, wherein the defragmenting processing device preserves defragmenting progress data indicative of a progress condition of the defragmenting processing if the defragmenting processing under performance is interrupted.

8. The navigation system according to claim 7, further comprising an engine sensor for detecting an operated state of an engine of a vehicle, wherein the defragmenting processing device not only monitors an output of the engine sensor during executing the defragmenting processing but also interrupts the defragmenting processing in response to a stop of the engine.

9. The navigation system according to claim 8, wherein the

defragmenting processing device restarts the defragmenting processing based on the defragment progress data when the engine under halt is started after the defragmenting processing was interrupted.

10. The navigation system according to claim 7, wherein the defragmenting processing device interrupts the defragmenting processing when the navigation is activated during execution of the defragmenting processing.

11. The navigation system according to claim 5, further comprising a readout device for reading out the map data from a recording medium in which the map data are recorded,

wherein the navigation control device executes a navigating operation based on the map data read out by the readout device when the navigation is under operation based on the map data stored in the storage device at a time when the execution of the defragmenting processing is ordered by the operation device, and

the defragmenting processing device executes the defragmenting processing in the recording medium.

12. The navigation system according to claim 5, further comprising a readout device for reading out the map data from a recording medium in which the map data are recorded; and

an ordering device for ordering execution of a navigating operation,

wherein the navigation control device executes the navigating

operation based on the map data read out by the readout device when activation of the navigating operation is ordered by the ordering device during the defragmenting processing in the storage device by the defragmenting processing device.

13. The navigation system according to claim 5, further comprising a readout device for reading out the map data from a recording medium in which the map data are recorded; and

an ordering device for ordering execution of a navigating operation,

wherein the defragmenting processing device interrupts a defragmenting operation when the recording medium is unloaded in the readout device as well as activation of the navigating operation is ordered by the ordering device during the defragmenting processing in the storage device by the defragmenting processing device.

14. The navigation system according to claim 13, wherein the navigation control device issues a message, after the interruption of the defragmenting processing, for urging a user to load the recording medium in which necessary map data are recorded, and the defragmenting processing device restarts the defragmenting processing based on the defragmenting progress data at a time when the recording medium is loaded.

15. The navigation system according to claim 9 or 14, further comprising a selective inputting device for enabling a user to selectively

input information about either one of the restart and discontinuation of the defragmenting processing, prior to the restart of the interrupted defragmenting processing.

16. The navigation system according to claim 1, wherein the defragmenting processing device is constructed so as to execute the defragmenting processing in cases a vehicle on which the navigation system is mounted is stopped.